



U.S. Department
of Transportation

**Federal Aviation
Administration**

Memorandum

Subject: ACTION: Review and Concurrence, Equivalent Level of
Safety Finding for ACES Project on Falcon Models 50,
900, and 900EX, FAA Project ST3302WI-T

Date: 9/30/2002

From: Manager, TSS Airframe/Cabin Safety Branch, ANM-115

Reg Ref: § 25.811, 25.812

Reply to: David Ostrodka,
Attn. of: ACE-118W

To: Manager, Wichita ACO, ACE-115W

ELOS: ST3302WI-T-A-1
Memo #:

Background

Aviation Consulting & Engineering Solutions, Inc. (ACES) letter dated February 22, 2002 requested an Equivalent Level of Safety Finding for Installation of Exit Signs for Falcon Models 50, 900, and 900EX. Similar equivalent safety findings have been granted for other similar aircraft.

Applicable Regulation(s)

§§ 25.811, 25.812

Regulation(s) requiring an ELOS

§§ 25.811(d)(1), 25.811(d)(2), 25.812(b)(1)(i)

Description of compensating design features or alternative standards which allow the granting of the ELOS

The small size of the fuselage in the aircraft for which the ELOS is proposed permits a single smaller sign to serve as both the locator sign required by 25.811(d)(1) and the marker sign required by 25.811(d)(2) while maintaining the illumination level required by 25.812(b)(1)(i) when viewed from an angle other than 90 degrees.

Explanation of how the design features or alternative standards provide an equivalent level of safety to the level of safety intended by the regulation.

Marker and locator signs perform two distinct functions, identifying the longitudinal location of the emergency exits along the aisle and marking the position of the exit in the fuselage. The small fuselage diameter and relative short length permit a single sign to perform both functions. A person standing in the aisle at the exit location is less than 3 feet from the exit and the maximum distance along the aisle is only 20 feet. The short distances involved permit signs with 1 inch rather than 1½ inch letters and less background area to have legibility equivalent to the required signs.

FAA approval and documentation of the ELOS

The FAA has approved the aforementioned Equivalent Level of Safety Finding in issue paper A-1 provided the installation meets the following requirements:

The proposed signs must be evaluated on an interior installation, which is conformed, including the sign installations. This evaluation must be accomplished in accordance with an FAA-approved test plan, by a formal demonstration.

The evaluation must be accomplished from the most adverse standing positions in the aisle [as assessed by worst-case occupant heights, i.e. 5-percentile female to 95-percentile male (approximately 5'2" to 6'1")]. The word "Exit" must be legible.

The § 25.812(b)(1)(i) required illumination levels and high-to-low background contrast must be met when measured from the most adverse angles consistent with those found onboard.

If the signs are found satisfactory by this evaluation, then a grant of equivalency to the requirements of §§ 25.811(d)(1), 25.811(d)(2), and 25.812(b)(1)(i) may be found. This memorandum provides standardized documentation of the ELOS that is non-proprietary and can be made available to the public. The Transport Directorate has assigned a unique ELOS Memorandum number (see front page) to facilitate archiving and retrieval of this ELOS. This ELOS Memorandum number should be listed on the Supplemental Type Certificate.

/s/

Jeff Gardlin for

Signature: _____
Manager, TSS Airframe/Cabin Safety Branch, ANM-115

Date: September 30, 2002